

Operating and Maintenance Instructions

WARNINGS



Before using this equipment, read the contents of EN 529 : 2005 and familiarise yourself with the requirements for respiratory protective devices and their potential effects on the wearer.



TORNADO and AIRLINE FCV system users must be familiar with workplace hazards prior to using the equipment and must be fully trained in the use of the apparatus.



TORNADO head-tops must be used with a T/POWER blower, T/A/LINE or AIRLINE FCV. Read this Manual in conjunction with the appropriate User Manual for the air-supplying device prior to using the equipment.



T/POWER must be fitted with filters selected from the TORNADO range of filters which are appropriate for the workplace hazard.



This product must only be used with Protector-branded filters manufactured by Scott Health and Safety Limited. The use of any other filters will negate the approval and will be likely to reduce the level of protection provided.



DO NOT confuse the EN 12941 and EN 12942 TORNADO filter markings with filter markings relating to other EN standards.



DO NOT use T25 in confined spaces, oxygen deficient atmospheres (<19.5%), oxygen enriched atmospheres (>23%) or where there is an immediate hazard to life or health.



DO NOT use the hood if the ambient temperature is outside of the range -10°C to +50°C. Humidity levels up to 95% RH do not present any operational problems.



DO NOT use if the apparatus is damaged. The head-top and air hose must be inspected on every occasion before use to ensure that no damage of any kind is evident, (eg chemical damage, splits or broken stitching), which could cause leakage or reduced levels of protection. A monthly inspection of the apparatus is a mandatory requirement in the UK under COSHH regulations and inspection on a monthly basis is strongly recommended for all other countries.



Protection will only be obtained if the unit is fitted correctly.



Protection levels may be reduced if wind speed exceeds 2 metres per second.



In the unlikely event that the air-supplying device fails while in a hazardous area, a depletion of oxygen and increase in carbon dioxide will occur within the hood. THE HELMET/HOOD MUST BE REMOVED AS SOON AS POSSIBLE TO AVOID DANGER OF SUFFOCATION. LEAVE THE AREA IMMEDIATELY.



TORNADO head-tops can be used in certain explosive and flammable atmospheres when used with T/POWER which is marked as intrinsically safe. It is the employer's responsibility to ensure that the intrinsic safety approval is compatible with the particular environment.



At very high work-rates, pressure in the device may become negative at peak inhalation flow.



Filters must not be fitted directly to the helmet/hood.

TORNADO T25

SPECIFICATION

Description:		Full Hood and Cape
Classification when used with:	T/POWER T/A/LINE AIRLINE FCV	EN 12941 TH3 EN 1835 LDH3 EN 14594 3B
Minimum Design Flow Rate when used with:	T/POWER T/A/LINE AIRLINE FCV	140 L/min 140 L/min 175 L/min
Assigned* (Nominal) Protection Factor when used with:	T/POWER T/A/LINE AIRLINE FCV	40 (500) 40 (200) 40 (200)
Operating Temperature Limits:	Hood Air-supplying device	-10°C to +50°C Refer to User Manual for air-supplying device being used.
Material:	Hood Visor	Hypalon-coated polyester or Trellech Super Butyl/Viton rubber-coated polyamide. Polycarbonate or Acetate options
Weight - (Combined Hood and Helmet):		920 Grams

* According to EN 529 : 2005

SELECTION OF AIR-SUPPLYING DEVICE

The following table identifies which air-supplying device(s) is/are approved for use with each type of **T25** head-top:

Type of Head-top		Type of Air-supplying Device		
Part No.	Material Description	T/POWER	T/A/LINE	AIRLINE FCV
T25/AC T25/PC	Hypalon-coated Polyester	✓	✓	✗
T25/AC/AS T25/PC/AS	Hypalon-coated Polyester - (Anti-static*)	✓	✓	✗
T25/AC/CS T25/PC/CS	Butyl/Viton Rubber-coated Polyamide	✓	✗	✓

* Anti-static, surface resistivity of less than 4.0×10^{12} Ohms.

MARKINGS AND MEANINGS

The **T25** head-top markings are in conformance with EN 12941, as follows:

Head-top Markings:

Marking	Meaning	Marking	Meaning
SCOTT	Manufacturer - Scott Health & Safety	PC	Polycarbonate visor
T25/HOOD/	Product name	AS	Anti-static material
AC	Acetate visor	CS	Butyl/Viton material

Visor Markings:

Marking	Meaning	Marking	Meaning
SHS	Manufacturer's identification mark	B	Medium energy impact
1	Optical class 1	9	Resistance to molten metals
F	Low energy impact	CE	CE mark

Helmet Markings:

Marking	Meaning	Marking	Meaning
SHS Protector	Manufacturer's identification mark	LDH3	Class designation - EN 1835
Tuffmaster II	Helmet type	3B	Class designation - EN 14594
T25	Apparatus type	EN397	Helmet certification
CE	CE mark	50 - 64cm	User head size: lower and upper limits
0086	Certifying body	-30°C	Very low temperature
TH3	Class designation - EN 12941	MM	Helmet molten metal classification
		440V a.c.	Electrical insulation

WEARING

Note:

Remove the protective transit film from the outside and inside surfaces of the visor before donning.

CAUTION:

Whilst the materials which may come into contact with the wearer's skin are not known to be likely to cause skin irritation or other adverse effects to health, they may cause allergic reactions in particularly susceptible individuals.

1. Check that the hood is in good condition and free from damage that might reduce respiratory protection. Ensure that the visor is free from blemishes which might impair vision. Check that the helmet and helmet cradle are in good condition and free from cracks or crazing. Flex the helmet and check that crazing does not appear.
2. Don the headpiece and adjust the hand-wheel at the back of the head harness to allow the harness to fit comfortably over the forehead. It may be necessary to adjust the helmet cradle so that visor is at the correct height. If the cradle is adjusted, the head-top fit must be re-adjusted. The visor can be moved closer to, or further away from, the face by sliding the visor carrier arms through the visor mounting posts. Adjust the hood drawstring for a comfortably tight fit around the neck.
3. Check that hair and clothing are NOT trapped in the seal. Arrange the breathing hose so that it trails freely down the back and is not kinked or looped.

For further information, please refer to the User Manual for air-supplying device being used.

AFTER USE

WARNING:

DO NOT remove the face-piece until safely clear of the hazardous area.

1. It is recommended that the hood is cleaned and decontaminated by light showering, taking steps to ensure that water cannot enter the filters or blower housing of the **TORNADO**. If water enters the blower or filter, it will cause contamination which will be impossible to remove.
2. Taking care not to damage the visor and especially the transparent tape around the visor, sponge the inner and outer surfaces of the headpiece as necessary using warm water and a mild detergent such as **TriGene™**.

CAUTION:

- **DO NOT use stiff-bristled brushes, strong detergents or solvent cleaners as they may cause damage.**
 - **DO NOT allow water to enter the breathing hose.**
3. Check the hood, exhale valve, drawstring, helmet harness, cradle, visor and visor connection points for wear and damage. If damage is evident, discard and replace components as appropriate.
 4. Dry the headpiece thoroughly prior to storage and store carefully, ensuring that it is not creased, scratched or torn. Do not use radiant heat or artificial heating over 40°C for drying purposes, as this may cause damage.

STORAGE

When not in use, the equipment should be stored in a clean, dry environment, away from direct heat sources between +10°C and +30°C, at a humidity of less than 65% RH.

MAINTENANCE

Carry out a thorough inspection of all component parts before and after each occasion of use, paying particular attention to the exhale valve flap. The valve flap must be replaced annually regardless of condition. Valve flaps in storage have a shelf-life of five years, after which time they should be discarded.

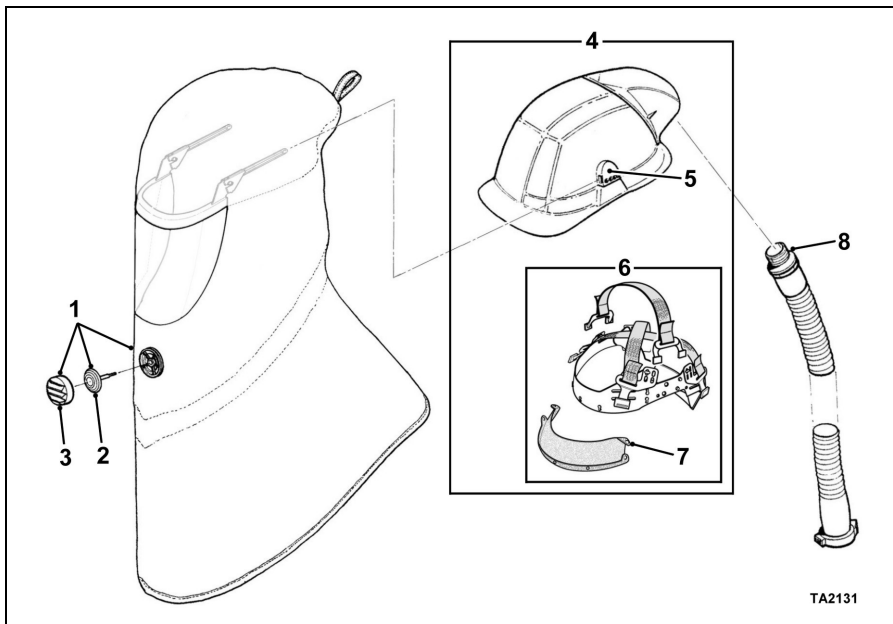
Exhalation valve flaps are marked with a code indicating the year of manufacture. The code '07' corresponds to 2007 and a dot is added each year thereafter, so '07.' would equate to 2008.

RECORD INSPECTION AND MAINTENANCE DETAILS

Record test and maintenance details on the Inspection and Maintenance Record Sheet provided at the back of this Manual.

Information recorded usually includes:

- Name of employer responsible for the apparatus.
- Make, model number or identification mark of the apparatus, together with a description of any distinguishing features, sufficient to enable clear identification.
- Date of the inspection/maintenance together with the name, signature or unique authentication mark of the examiner.
- Condition of the apparatus, details of any defects found and any remedial action taken.

SPARE PARTS


Item No.	Description	Part No.
1	Hood - with Polycarbonate Visor (a)	T25/HOOD/PC
1	Hood - with Polycarbonate Visor (b)	T25/HOOD/PC/AS
1	Hood - with Polycarbonate Visor (c)	T25/HOOD/PC/CS
1	Hood - with Acetate Visor (a)	T25/HOOD/AC
1	Hood - with Acetate Visor (b)	T25/HOOD/AC/AS
1	Hood - with Acetate Visor (c)	T25/HOOD/AC/CS
2	Exhale Valve Flap (Pack of 2)	TOR/VALVE
3	Exhale Valve Cover (Pack of 5)	2017146
4	Helmet Assembly	T25/HELMET/ASSY
5	Visor Mounting Post (Pack of 2)	2011022
6	Head Harness	HXHG71RH
7	Sweatband (Pack of 20)	HXSB40T
8	Breathing Hose	T/HOSE/EPDM
-	Tear-off Visor Cover (Pack of 10)	KIT96/VP
-	TriGene Liquid (1 Litre)	2008247

(a) - Hypalon-coated Polyester.

(b) - Hypalon-coated Polyester - (Anti-static).

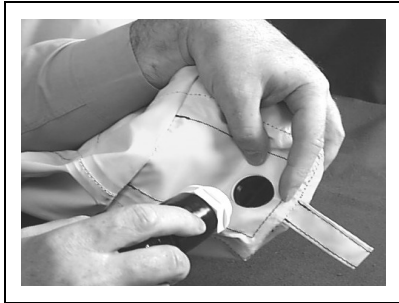
(c) - Butyl/Viton Rubber-coated Polyamide.

TORNADO T25

FITTING SPARES

To Replace the Hood:

(a) Remove existing hood



1. Unscrew and remove hose from helmet/hood (see *To replace the hose* for further details).



2. Fold back the hood from the rear of the helmet so that the visor carrier arms are exposed.



3. Pull gently to withdraw the visor arms from the mounting posts on the helmet. The helmet and hood are now separated.

(b) Fit replacement hood



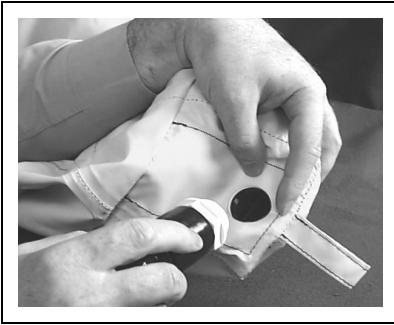
1. Fold back of the hood sufficiently to expose visor carrier arms and insert helmet.



2. Align visor carrier arms with visor mounting posts on the helmet and push each arm into its respective mounting post.



3. Taking a firm hold of the helmet with one hand and the hood with the other, slowly pull the back of the hood over helmet until helmet is correctly positioned within the hood.



4. Ensure that the hose entry hole in the hood is correctly aligned with that in the helmet. Fit the hose to helmet/hood (see *To replace the hose* for further details).

To Replace the Hose:

1. Remove the hose from the helmet by unscrewing in a counter-clockwise direction.
2. Fit the new hose by inserting the threaded end into the captive nut within the aperture at the rear of the helmet. Secure hose by screwing in a clockwise direction until finger-tight. DO NOT over-tighten.

To Replace the Exhale Valve:

1. Pull the valve cover from the valve and pull the exhale valve flap from its housing.
2. Fit the replacement valve and check that the valve flap lies flat on the frame. Align the valve cover with the slots in the valve and snap it onto the valve.

To Replace the Sweatband:

1. Separate the helmet from the hood. Pull the old sweatband from the head harness hooks.
2. Fit the new sweatband onto the four hooks in the lower front of the headband, fold across that part of the headband nearest the head and clip on to the two hooks at the top of the headband.

To Replace the Head Harness:

1. Separate the helmet from the hood and turn the helmet upside down so that the harness is visible. Remove all retaining tabs by using both thumbs to push the tabs toward the open ends of the slots in the helmet rim.
2. Fully insert the white retaining tabs of the replacement head harness into the slots in the helmet rim and push down until they click into place.

WARRANTY

The products manufactured at our factories in Skelmersdale and Vaasa carry a warranty of 12 months (unless stated otherwise) for parts, labour and return to site. The warranty period runs from the date of purchase by the end user.

These products are warranted to be free from defects in materials and workmanship at the time of delivery.

SCOTT will be under no liability for any defect arising from wilful damage, negligence, abnormal working conditions, failure to follow the original manufacturer's instructions, misuse or unauthorised alteration or repair.

Evidence of purchase date will need to be provided for any claims arising during the warranty period. All warranty claims must be directed through **SCOTT Customer Services** and in accordance with our sales return procedure.

NOTIFIED BODIES

Inspec International Limited (0194)
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Salford,
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M6 6AJ,
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